REMARKS

Present Status of Application

This is a full and timely response to the outstanding non-final Office Action mailed on September 30, 2005. The Office Action rejected claims 1, 2 under 102(b) as being anticipated by Blackburn (US 2003/019608). The Office action also rejected claims 1-2, 4-6 and 9 under 35 USC§103(a) as being unpatentable over Okamoto (US 2003/0059817) in view of Kapur et al. (US 6,548,263). The Office action further rejected claim 3 under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al. (US 2003/0059817) in view of Kapur et al. (US 6,548,263) as applied to claim 1, and further in view of Chen et al. (US 6,594,432). In addition, the Office Action further rejected claim 7-8 as being unpatentable over Okamoto in view of Kapur further in view of Oprandy (US 5,200,312).

Upon entry of the amendments, claims 1, 3-9 and 21 remain pending of which claim 2 has been amended and claim 21 has been added. Supports of the amendments can be founded from paragraphs [0021]-[0025]. It is believed that no new matter is added by way of these amendments made to the claims or otherwise to the application.

After carefully considering the remarks set forth in this Office Action and the cited references, Applicants respectfully submitted that the presently pending claims are already in condition for allowance. Reconsideration and withdrawal of the Examiner's rejection are requested.

Discussions for 102 & 103 rejections

Claims 1, 2 were rejected under35 USC§102(b) as being anticipated by Blackburn (US Patent Publication No. 2003/0190608).

Case 608 relates to a microfluidic device with microchannels that have separated regions which have a member of a specific binding pair member such as DNA or RNA bound to porous polymer, beads or structures fabricated into the microchannel. The microchannels of the invention are fabricated from plastic and are operatively associated with a fluid propelling component and detector.

Claim 1 of case 608 is a microfluidic device comprising a substrate comprising a plurality of biochannels each comprising a plurality of spatially distinct regions upon which capture binding ligands are immobilized.

Although the examiner indicated that parts 103, 150, 152, 153 and 162 stated some conditions of the present invention, case 608 is directed to microfluidic device. We also noted from part 24 of case 608 that a number of microfluidic devices have been developed, generally comprising a solid support with microchannels, utilizing a number of different wells, pumps, reaction chambers.

It is apparent that microfluidic devices of case 608 require at least channels to complete the desired work such as target assay. To the contrary, the cell detection chip of the invention need not require complex structure such as microchannels to complete target assay. To the persons skilled in the microfludic device, they will not use such cell chips to make assay because such chips may have sample contamination. This is why microfludic device requires some channels to avoid sample contamination. It is

surprisingly that the present invention can complete one assay without sample contamination is mainly focused on the condition of selection of probe, i.e., (1) affinity exists between each of the probe molecules and one of corresponding specific molecules on a cell membrane and (2) different corresponding specific molecules on a cell membrane between normal cells and pathologically changed cells

In addition, the price of manufacturing of the chip of the present invention is cheaper than that of case 608. To consider on economic efficacy of completing one assay, the Applicant believes that the present invention is more acceptable for public.

For at least these reasons, Applicant respectfully asserts that case 608 fails to teach or suggest the present invention or to render claim 1 anticipated. Since claim 2 is a dependent claim, which further defines the invention recited in claim 1, Applicants respectfully assert that claim 2 is also in condition for allowance.

The Office Action rejected claim 1-2, 4-6 and 9 under 35 USC§103(a) as being unpatentable over Okamoto (US 2003/0059817) in view of Kapur et al. (US 6,548,263)

Case 817 is a method of spotting a probe densely and efficiently on a surface of a solid support wherein a liquid containing a probe is attached to a solid support as droplets to form spots containing the probe on the solid support by an ink jet method.

Parts 46 and 56 of Case 817 are respectively the statement of known modification and spotting steps. The Examiner admitted that Case 817 fails to teach specific molecules on a cell membrane.

Case 263 is methods for making a substrate for selective cell patterning, and the substrates themselves, wherein the method comprises contacting reactive hydroxyl groups on the surface of a substrate with a hydroxyl-reactive bifunctional molecule to form a monolayer, and using stencils to deposit cell repulsive or cell adhesive moieties in controlled locations on the cell culture substrate. Col. 13 lines 50-67 and col., 14 lines 53-55 are directed to chemically modified arrays of cell binding locations. Col., 15, lines 62-67 states "cell binding molecules are flooded onto the modified chemical array wherein they react with the other half of the crosslinker. The array is then washed to eliminate any unbound bi-functional crosslinker and cell binding molecules."These columns are directed to modification of the present invention.

It is apparently that the method of Case 263 requires stencils and reactive hydroxyl groups. To the contrary, the method of the present invention need not require such stencils to make cell chip.

Further, the Applicant has amended Claim 1 by adding "the selection of the plurality of probe molecules is based on the different corresponding specific molecules on a cell membrane between normal cells and pathologically changed cells to identify various type of one disease" to clearly differentiate from the citations. In view of the current amended claims, the combination of Case 817 and Case 263 neither taught nor suggested the method of the present invention.

Claim 9 depends on Claim 1. The Applicant believes that the challenge on Claim 9 should be withdrawn accordingly.

The Office Action rejected claim 3 under 35 USC 103(a) as being unpatentable over Okamoto (US 2003/0059817) in view of Kapur et al. (US 6,548,263) and further in view of Chen et al. (US Patent 6,594,432, hereinafter Chen).

The Office Action rejected claims 7 and 8, under 35 USC 103(a) as being unpatentable over Okamoto (US 2003/0059817) in view of Kapur et al. (US 6,548,263) and further in view of Oprandy (US 5,200,312).

The cores of the rejections are the combination of Case 817 and Case 263 plus US 6594432 or US 5200312. Applicants respectfully submit that these claims defined over the prior art references for at least the reasons discussed above. That is, the combination of the citations neither taught nor suggested the method of the present invention.

CONCLUSION

In view of the foregoing, it is believed that all pending claims are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,

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